

Notice of Allowability

Application No.

09/837,678

Applicant(s)

OGLE ET AL.

Examiner

ALEX NOGUEROLA

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1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01/18/2005 and 02/04/2005.
2. ☒ The allowed claim(s) is/are 1,3-12,14,15,17-26 and 28-49.
3. ☒ The drawings filed on 18 April 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Baltazar on February 04, 2005.

The application has been amended as follows:

- a) Claim 1, line 7: "area," has been replaced with -- area between the anode and cathode, -- ;
- b) Claim 1, line 8: ";" has been replaced with -- and --;
- c) Claim 15, line 7: "area," has been replaced with -- area between the anode and cathode, -- ;
- d) Claim 15, line 12: "(e)" has been replaced with -- and also --;
- e) Claim 28, line 7: "area," has been replaced with -- area between the anode and cathode, -- ;
- f) Claim 28, line 11: -- and also -- has been inserted after ",";

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g) Claim 37, line 10: "therebetween;" has been replaced with -- between the first separation barrier and the second separation barrier; --

h) Claim 37, line 13: "potential," has been replaced with -- potential --;

i) Claim 37, line 14: "and" has been deleted;

j) Claim 38, line 9: "therebetween;" has been replaced with -- between the first separation barrier and the second separation barrier; --;

k) Claim 38, line 11: "therebetween;" has been replaced with -- between the third separation barrier and the first barrier; --;

l) Claim 38, line 15: "potential, and" has been replaced with -- potential --; and

m) the abstract has been replaced with the following

-- An electrophoresis apparatus for processing compounds in small sample volumes comprising a cathode in a static cathode buffer zone or compartment, an anode in a static anode buffer zone or compartment. The cathode disposed relative to the anode so as to be adapted to generate an electric field in an electric field area therebetween upon application of a voltage potential between the cathode and anode. A removable cartridge disposed in the electric field area between the anode and the cathode. The cartridge containing a first non-isoelectric separation barrier and also a second non-isoelectric separation barrier disposed between a selected one of the cathode buffer zone and the anode buffer zone and the first barrier so as to define a first chamber having an interstitial volume of less than 5 ml therebetween. --

Allowable Subject Matter

2. Claims 1, 3-12, 14, 15, 17-26, and 28-49 are allowed.
3. The following is an examiner's statement of reasons for allowance:
 - a) Claim 1 requires (a) a removable cartridge to be disposed in the electric field area between the anode and cathode, and (b) in use "a sample containing one or more compounds is provided to the first chamber."

Speicher does not disclose a removable cartridge. In Speicher compartments are formed by individually fitting and sealing charged membranes to the chamber.

See col. 18:27-29. Furthermore, the separation compartments between the anode and cathode in Speicher are defined by isoelectric barriers. See col. 4:45 – col. 5:6 and col. 6:17-32. To use non-isoelectric barriers instead would be contrary to the purpose of the device as it the device has been especially designed for isoelectric focusing. See the abstract.

Murakawa discloses an embodiment having a removable cartridge (26). See Figures 4 and 5. However, in use the sample is placed in either the bottom electrode reservoir (below membrane 25) before the cartridge is inserted into the tank, or in the top electrode reservoir (above membrane 27) after the cartridge has been inserted into the tank (24). See the full paragraph on page 15 of the English language translation of Murakawa and the paragraph at the bottom of page 15 of the English language translation of Murakawa bridging to the following page. Sample cannot be placed into the first

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chamber, which is defined by membranes 25 and 27 and the inner wall of cartridge 26, as the first chamber is sealed by the membranes. Furthermore, it would be inconsistent with the purpose of the first chamber to do so as the membranes of the first chamber allow successive molecular weight fractionation of the sample and trapping of some sample components in the first chamber. See the full paragraph on page 15 of the English language translation of Murakawa. To place a sample into the first chamber, which the first chamber of Murakawa is not adapted for, would cause the sample to “skip” one of the fractionating membranes;

b) Claims 3-12, 14, 33, and 35 depend directly or indirectly from allowable claim 1;

c) independent Claim 15 requires (a) a removable cartridge to be disposed in the electric field area between the anode and cathode, and (b) in use “a sample containing one or more compounds is provided to a selected one of the first and second chambers.” As discussed with regard to the allowability of claim 1, above, Speicher and Murakawa teach away from at least one of these features;

d) Claims 17-26, 32, 34, 36 depend directly or indirectly from allowable claim 15;

e) independent Claim 28 requires (a) a removable cartridge to be disposed in the electric field area between the anode and cathode, and (b) in use “a sample containing one or more compounds is provided to the first chamber.” As discussed with regard to the

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allowability of claim 1, above, Speicher and Murakawa teach away from at least one of these features;

f) Claims 29-31 depend directly or indirectly from allowable claim 28;

g) independent Claim 37 requires (a) the first chamber to be defined by the interstitial volume between the first non-isoelectric separation barrier and the second non-isoelectric separation barrier, and (b) the step of “placing a sample in the first chamber.”

In Speicher the separation compartments between the anode and cathode in Speicher are defined by *isoelectric* barriers. See col. 4:45 – col. 5:6 and col. 6:17-32. To use non-isoelectric barriers instead would be contrary to the purpose of the device as it the device has been especially designed for isoelectric focusing. See the abstract.

Murakawa discloses an embodiment having a removable cartridge (26). See Figures 4 and 5. However, in use the sample is placed in either the bottom electrode reservoir (below membrane 25) before the cartridge is inserted into the tank, or in the top electrode reservoir (above membrane 27) after the cartridge has been inserted into the tank (24). See the full paragraph on page 15 of the English language translation of Murakawa and the paragraph at the bottom of page 15 of the English language translation of Murakawa bridging to the following page. Sample cannot be placed into the first chamber, which is defined by membranes 25 and 27 and the inner wall of cartridge 26, as the first chamber is sealed by the membranes. Furthermore, it would be inconsistent with the purpose of the first chamber to do so as the membranes of the first chamber allow

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successive molecular weight fractionation of the sample and trapping of some sample components in the first chamber. See the full paragraph on page 15 of the English language translation of Murakawa. To place a sample into the first chamber, which the first chamber of Murakawa is not adapted for, would cause the sample to “skip” one of the fractionating membranes;

h) independent claim 38 requires (a) the first chamber to be defined by the interstitial volume between the first non-isoelectric separation barrier and the second non-isoelectric separation barrier, and (b) the step of “placing a sample in a selected one of the first and second chambers.” As discussed with regard to the allowability of claim 37, above, Speicher and Murakawa teach away from at least one of these features;

i) Claims 39-48 and 49/37 depend directly or indirectly from allowable claim 37; and

j) Claim 49/38 depend directly or indirectly from allowable claim 38.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX NOGUEROLA whose telephone number is (571) 272-1343. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NAM NGUYEN can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alex Noguerola
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February 4, 2005